

I claim:

1. (new): A portable game system comprising:
  - (a) a housing arranged to be held in a player's hands during use;
  - (b) a first discrete display device in said housing;
  - (c) at least one control device in said housing that is manually operated by said player to cause generation of direction data that varies in accordance with variable degrees of distance and direction of movement of said player's finger; and
  - (d) a processing system in said housing for generating image data representing a simulated 3-dimensional game world in which a 3-dimensional player-controlled object having plural body parts is rendered as texture mapped polygons moving in the simulated 3-dimensional game world in accordance with said direction data and viewed from at least first and second variable viewpoints for display on said first discrete display device.
2. (new): The system of claim 1, further comprising a second discrete display device for displaying said player-controlled object having plural body parts rendered as texture mapped polygons moving in said simulated 3-dimensional game world viewed from at least one of said first and second variable viewpoints.

3. (new) : The system of claim 2, further comprising means for displaying pictures in stereoscopic 3-dimensions on at least one of said discrete display devices, wherein said texture mapped polygons represent left and right views from said first and second viewpoints of said 3-dimensional player-controlled object observable on the stereoscopic discrete display device by a player's left and right eyes respectively.
4. (new) : The system of claim 1, wherein said processing system comprises a central processing unit (CPU) processor and a graphics co-processor.
5. (new) : The system of claim 1, wherein said control device is a miniature analog joystick.
6. (new) : The system of claim 1, wherein said control device is a touch sensitive direction control device.
7. (new) : The system of claim 1, wherein said player's finger is the player's thumb.
8. (new) : The system of claim 1, wherein said control device has a base end rotatably supported in said housing and has a protruding end manually operable by said player to cause generation of said direction data.

9. (new): The system of claim 1, further comprising means for digitally transmitting data from said processing system to a separate external game apparatus and for receiving data from said external game apparatus.

10. (new) : A method of operating a portable game system having a discrete display device, a processing system, and at least one manual control device that generates direction data that varies in accordance with variable degrees of distance and direction of movement of a player's finger, the method comprising the following steps:
- (a) generating in said processing system first digital data representing pictures of a 3-dimensional player-controlled object having plural body parts rendered as textured polygons moving in a simulated 3-dimensional game world under control of said manual control device and viewed from a first variable viewpoint for display on said discrete display device; and
  - (b) generating in said processing system second digital data representing pictures of said 3-dimensional player-controlled object rendered as textured polygons moving in said simulated 3-dimensional game world under control of said manual control device and viewed from a second variable viewpoint that is separate from said first viewpoint for display on said discrete display device.
11. (new) : The method of claim 10, wherein said discrete display device is operative to display pictures in stereoscopic 3-dimensions, and wherein said first and second digital picture data represent left and right views of said 3-dimensional object observable on said discrete display device by said player's left and right eyes respectively.

12. (new) : The method of claim 10, wherein said portable game system further comprises a second discrete display device that is operative to display pictures in stereoscopic 3-dimensions, and wherein said first and second digital picture data represent left and right views of said 3-dimensional object observable on said second discrete display device by said player's left and right eyes respectively.
13. (new) : The method of claim 10, wherein said processing system comprises a central processing unit (CPU) processor and a graphics co-processor.
14. (new) : The method of claim 10, wherein said control device is a miniature analog joystick.
15. (new) : The method of claim 10, wherein said control device is a touch sensitive direction control device.
16. (new) : The method of claim 10, wherein said player's finger is the player's thumb.

17. (new): A data carrier for use with a portable game system having a discrete display device, a processing system, and at least one manual control device that generates direction data that varies in accordance with variable degrees of distance and direction of movement of a player's finger, the data carrier carrying game program instructions comprising:
- (a) first game instructions that cause said processing system to generate first digital data representing pictures of a 3-dimensional player-controlled object having plural body parts rendered as textured polygons moving in a simulated 3-dimensional game world under control of said manual control device and viewed from a first variable viewpoint for display on said discrete display device; and
  - (b) second game instructions that cause said processing system to generate second digital data representing pictures of said 3-dimensional player-controlled object as textured polygons moving in said simulated 3-dimensional game world under control of said manual control device and viewed from a second variable viewpoint that is separate from said first viewpoint for display on said discrete display device.
18. (new): The data carrier of claim 17, wherein said data carrier is an optically coded disk.
19. (new): The data carrier of claim 17, wherein said data carrier comprises semiconductor memory.

20. (new) : The data carrier of claim 17, wherein said discrete display device is operative to display pictures in stereoscopic 3-dimensions, the data carrier further comprising third game instructions that cause said processing system to generate said said first and second digital picture data to represent left and right views of said 3-dimensional object observable on said discrete display device by said player's left and right eyes respectively.
21. (new) : The data carrier of claim 17, wherein said portable game system further comprises a second discrete display device that is operative to display pictures in stereoscopic 3-dimensions, the data carrier further comprising third game instructions that cause said processing system to generate said first and second digital picture data to represent left and right views of said 3-dimensional object observable on said second discrete display device by said player's left and right eyes respectively.